# Self-medication in elderly primary care

# Automedicação em idosos da Atenção Básica

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**ABSTRACT | OBJECTIVE:** To describe the practice of self-medication in the elderly assisted in Primary Care. **METHOD:** Cross-sectional, descriptive, and exploratory study carried out with elderly people enrolled in the Family Health Strategy (FHS) Mutirão in the municipality of Cocal, Piauí, Brazil. Elderly people with physical and functional autonomy were included. The data were collected through the application of a questionnaire containing sociodemographic data and data related to the practice of self-medication. The analysis was carried out using descriptive statistics. **RESULTS:** A total of 35 elderly were included in the sample, with a mean age of 70 (± 6.6) years and a predominance of females (65.7%). It was found that 80% of participants reported using medications regularly, 62.8% did not receive information about the dangers of self-medication, 68.6% took medication without a prescription, and 48.6% used medication indicated by a neighbor/friend/relative. Pain followed by the flu/cold was the most common reason for self-medication. Pharmaceutical counseling (74.3%) and having solved the health problem before the medical consultation (68.6%) are among the causes that favored this practice. **CONCLUSION:** The data suggest that self-medication among the elderly is common, especially in pain and colds, and that the difficulty of access to medical consultation, pharmaceutical guidance, and ignorance of the dangers predispose to this practice.

**DESCRIPTORS:** Aged. Self-medication. Nonprescription drugs. Primary Health Care.

**RESUMO | OBJETIVO:** Descrever a prática da automedicação em idosos atendidos na Atenção Básica. **MÉTODO:** Estudo transversal, descritivo e exploratório realizado com idosos adscritos na Estratégia Saúde da Família (ESF) Mutirão do município de Cocal, Piauí. Foram incluídos idosos com autonomia física e funcional. Os dados foram coletados por meio da aplicação de um questionário contendo dados sociodemográfico e dados relacionados à prática da automedicação. A análise se deu pela estatística descritiva. **RESULTADOS:** Um total de 35 idosos integraram a amostra, com média de idade 70 (± 6,6) anos e predominância do sexo feminino (65,7%). Verificou-se que 80% dos participantes referiram fazer uso de medicações de maneira regular, 62,8% não receberam informações sobre os perigos da automedicação, 68,6% toma remédios sem prescrição médica e 48,6% usa medicação indicada por vizinho/amigo/parente. Quadros álgicos seguido da gripe/resfriado foram os motivos mais comuns da automedicação. A orientação farmacêutica (74,3%) e ter resolvido o problema de saúde antes da consulta médica (68,6%) estão entre as causas que favoreceram a referida pratica. **CONCLUSÃO:** Os dados sugerem que a automedicação entre os idosos é comum, principalmente em quadros álgicos e resfriados, e que a dificuldade de acesso à consulta médica, orientação farmacêutica e o desconhecimento dos perigos predispõem a esta prática.

**DESCRITORES:** Idoso. Automedicação. Medicamentos sem Prescrição. Atenção Básica.

## Introduction

The increase in the elderly population is a reality observed worldwide and in Brazil. According to data from the Brazilian Institute of Geography and Statistics (IBGE), Brazil had a total of 20,590,599 elderly people in 2020.[1] The National Household Sample Survey (PNAD) revealed that in 2013 elderly people represented 13% of Brazil's total population. In 2015 this percentage increased to 14.3%. In the northeastern Brazilian region, the proportion of elderly people represents 10.5% of this region's total population.[2]

The growth in the number of elderly people implies adequacy of health care services due to the epidemiological profile characteristic of this portion of the population. A higher prevalence of Chronic Non-Communicable Diseases (NCDs), a decline in functional capacity, and an increase in morbidity lead elderly individuals to frequently use health services, either for diagnosis or monitoring ongoing treatment.[3] Considering this fact, the Ministry of Health (MH) made elderly health care a priority and defined Primary Health Care (PHC) as the gateway.[4]

The elderly population presents diagnostic diversity of CNCDs, and the increase in longevity frequently influences the use of pharmacological therapy to treat these conditions. In addition, drugs used for treatment are seen as a symbol of health by this population, essential for health, and an important therapeutic tool. Thus, medications correspond to most of the used treatment in health services.[5]

The most varied dysfunctions in body systems to which elderly people are susceptible are treated with medication, and in many cases, the diagnostic plurality implies a polypharmacy.[6] The medication is an important supporting instrument in the maintenance and recovery of an elderly's health.[7]

PHC is the gateway and a vital component of the Brazilian Universal Health System (SUS), carrying out health promotion, protection, and recovery actions.[4] Integrality to health in PHC implies carrying out activities appropriate to their level of care within the SUS so that there is a dismiss of quality medication and promotion of its use in an adequate manner, contributing to a greater resoluteness in PHC.[3,8]

Self-medication reflects a human's need to participate in their own health, both in disease prevention and treatment. That entails that self-medication is inevitable and intrinsic to human nature; it is a universal practice, present in the most diverse societies and cultures.[9]

In elderly individuals, pharmacology presents particularity due to reducing body fluids and loss of muscle mass. In addition, the impairment of liver metabolism and renal function makes it difficult to eliminate metabolites, and there may be an accumulation of toxic substances and possible adverse reactions.[7] Elderly individuals consume most of the worldwide production of medicines and are more sensitive to their effects. Thus, the practice of self-medication in this portion of the population deserves special attention.[10] Given the above, the objective of this manuscript is to describe the practice of self-medication in elderly people assisted in Primary Care.

## Methods

This study had a cross-sectional descriptive and exploratory nature. It was held at the Family Health Strategy Unit (FHS) Mutirão, belonging to Primary Care in the urban area of Cocal, Piauí. The unit was assigned because it is considered a management model followed by the other FHS in the municipality. Authorization to carry out this research was given by the Municipal Health Department.

The sample was intentional and non-probabilistic, consisting of 35 elderly people assisted by the research locus unit. Elderly individuals who sought care at the unit during the data collection period were invited to participate in this study. They were informed about the research objectives and clarified the procedures for data collection. The intention to participate was confirmed by signing the Informed Consent Form (ICF).

The inclusion criteria adopted in this study were: elderly people enrolled in the chosen area of action of the FHS, who performed follow-up treatment or sought care during the data collection period, with physical and functional autonomy. In addition, elderly people with cognitive deficits that made it difficult to fill out the research forms and elderly people who were in the process of being transferred from the FHS were adopted as exclusion criteria.

In order to preserve the privacy of the volunteers, data collection took place through interviews conducted in a private room at the Basic Health Unit (BHU). For this step, researchers developed a semi-structured questionnaire containing questions about the sociodemographic profile, life habits (smoking, alcohol consumption, and sedentary lifestyle), the medication used, and the practice of self-medication. Regarding sedentary lifestyle issues, participants were informed that the condition for not being classified as sedentary referred to regular physical activity, at least three times a week, with a minimum duration of 30 minutes.[11] The questions that investigated the practice of self-medication by the volunteers had yes/no answer options.

Questions about the practice of self-medication and whether the elderly were informed about the dangers of self-medication, whether someone helped them to take their usual medications and whether they used medications that their physician did not prescribe were included in the questionnaire. The instrument also had questions related to common situations that lead them to use medication without consulting a medical professional. The most recurrent reasons for this situation were self-medication for pain in different body regions, flu/cold, fever, among other symptoms.

Data collection took place from August to September 2018 and was performed by a single previously trained evaluator. Data were tabulated in Microsoft Office Excel version 2017. Descriptive statistics were used with absolute frequency for qualitative variables and mean with standard deviation for quantitative variables.

All steps of this research were developed following the Guidelines and Regulatory Norms for Research Involving Human Beings of the National Council of Ethics in Research of the MH, in compliance with resolution 466/2012 of the National Health Council (NHC). The procedures for data collection and analysis occurred only after approval by the Research Ethics Committee (RHC) of the Institute of Applied Theology (INTA), CAAE: 92010218.3.0000.8133, number: 2.743.967.

## Results

The studied 35 elderly individuals had a mean age of 70 (± 6,6) years. Data regarding sociodemographic characteristics, lifestyle, and presence of CNCDs are found in Table 1. We observed a preponderance of female individuals 23 (65.71%), white skin color 18 (51.4%), illiterate 20 (57.1%), retired 24 (68,6%), married 21 (60.0%), living with a spouse 21 (60.0%) and with an income of one minimum wage 22 (62.8%). Regarding lifestyle, 4 (11.4%) individuals were alcoholics, 8 (22.8%) were smokers and 21 (60.0%) were sedentary. Heart-related diseases were the most 19 (54.3%) within the CNCDs.

**Table 1.** Distribution according to sociodemographic characteristics, lifestyle and presence of chronic non-communicable diseases in elderly people in Primary Care, FHS Mutirão, Cocal, Piauí, 2018

| Variable | n | % |
|---|---|---|
| **Skin color** | | |
| White | 18 | 51.4 |
| Brown | 11 | 31.4 |
| Black | 6 | 17.1 |
| **Schooling** | | |
| Illiterate | 20 | 57,1 |
| Incomplete Elementary School | 8 | 22.8 |
| Complete Elementary School | 5 | 14.3 |
| Incomplete High School | 0 | 0.0 |
| Complete High School | 1 | 2.8 |
| Undergraduate studies | 1 | 2.8 |
| **Profession** | | |
| Retired | 24 | 68.6 |
| Farmer | 9 | 25.7 |
| Merchant | 2 | 5.7 |
| **Marital Status** | | |
| Married | 21 | 60.0 |
| Unmarried | 5 | 14.3 |
| Widower | 8 | 22.8 |
| Divorced | 1 | 2.8 |
| **Who you live with?** | | |
| Spouse | 21 | 60.0 |
| Alone | 4 | 11.4 |
| Familiar | 10 | 28.6 |
| **Income** | | |
| < 1 minimum wage | 5 | 14,3 |
| 1 minimum wage | 22 | 62,8 |
| 2 minimum wages | 6 | 17,1 |
| > 2 minimum wages | 2 | 5,7 |
| **Lifestyle** | | |
| Alcoholism | 4 | 11.4 |
| Smoking | 8 | 22.8 |
| Sedentary lifestyle | 21 | 60.0 |
| **Non-Communicable Chronic Diseases** | | |
| Cardiac | 19 | 54,3 |
| Metabolic | 7 | 20,0 |
| Neurologic | 1 | 2,8 |
| Rheumatologic | 1 | 2,8 |
| Osteomyoarticular | 1 | 2,8 |
| Cancer | 1 | 2,8 |

Information related to the classes of medication used by the evaluated elderly are demonstrated in Graph 1, which shows that antihypertensive drugs (54.28%) are the most used class of drugs by the studied population, followed by antidiabetics (25.72%).

**Graph 1.** Classes of drugs used by elderly people in primary care, FHS Mutirão, Cocal, Piauí, 2018
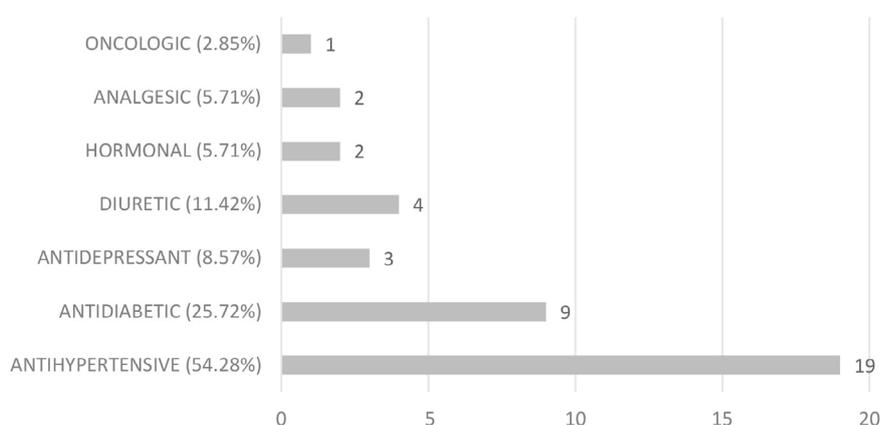
Data regarding the practice of self-medication by the volunteers are shown in Table 2, where it can be seen that the majority, 22 (62.8%), were not informed about the dangers of using the medication without prescription. 21 (60%) of the elderly people use more than one medication a day, and 24 (68.6%) take medications that a physician does not prescribe.

**Table 2.** Characteristics of the practice of self-medication among elderly people in primary care, FHS Mutirão, Cocal, Piauí, 2018

| Questions | Yes | | No | |
|---|---|---|---|---|
| | n | % | n | % |
| Do you regularly use medication? | 28 | 80 | 8 | 22.8 |
| Have you ever been made aware of the dangers and harms of taking medication without your doctor's knowledge? | 13 | 37.1 | 22 | 62.8 |
| Do you have someone (spouse/son/relative/caregiver) who can help you take your medications? | 9 | 27.7 | 26 | 74.3 |
| Do you accurately remember the time to take your medications? | 24 | 68.6 | 11 | 31.4 |
| Do you take more than one medication a day? | 21 | 60.0 | 14 | 40.0 |
| Have you ever got confused and changed the medication schedule? | 15 | 42.8 | 20 | 57.1 |
| Do you always go to your doctor's appointment at the BHU? | 17 | 48.6 | 18 | 51.4 |
| Do you take medications that your doctor does not prescribe? | 24 | 68.6 | 11 | 31.4 |
| Do you experience any side effects after taking medication that is not prescribed by your doctor? | 8 | 22.8 | 27 | 77.1 |
| Do you stop taking the medication without consulting your doctor? | 17 | 48.6 | 18 | 51.4 |
| Have you ever taken any medication recommended by a neighbor/friend/relative? | 17 | 48.6 | 18 | 51.4 |
| Do you usually use medicinal teas/bottles as medicine? | 23 | 65.7 | 12 | 34.3 |
| Have you ever used prescriptions previously issued by your doctor to buy medication? | 18 | 51.4 | 17 | 48.6 |
| Before self-medicating, did you look for information about the medication you were about to take? | 11 | 31.4 | 24 | 68.6 |
| When you self-medicated, were you taking medication prescribed by your doctor? | 24 | 68.6 | 11 | 31.4 |

Data referring to the reasons why the volunteers practice self-medication are shown in Graph 2. It is noteworthy that sore throat stood out, 19 (54.28%), followed by headache, 17 (48.57%) and bone pain, 15 (42.85%).

**Graph 2.** Evaluation of the reasons why elderly people in primary care practice self-medication, FHS Mutirão, Cocal, Piauí, 2018
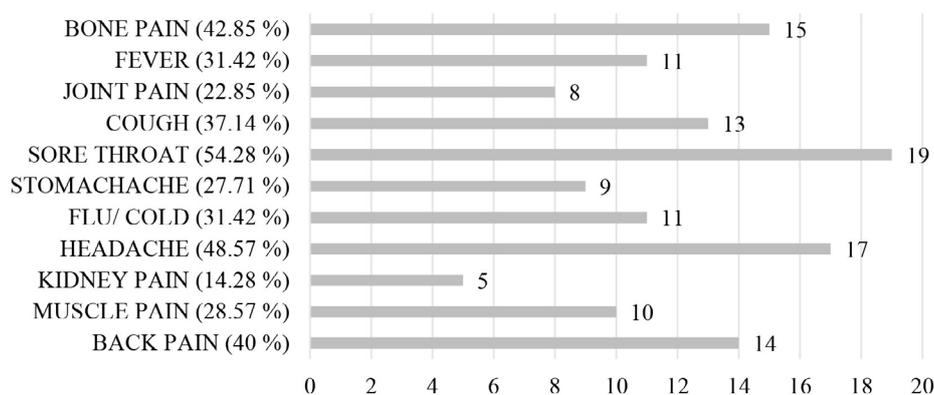
The information about why the studied elderly individuals practiced self-medication is found in Table 3. Pharmaceutical guidance was the reason cited by 26 (74.3%) of the volunteers, followed by the difficulty of making an appointment with a medical professional that was mentioned by 17 (48.6%) of the elderly.

Table 3. Reasons for the practice of self-medication among elderly people in primary care, FHS, Mutirão, Cocal, Piauí, 2018

| Reasons | n | % |
|---|---|---|
| Difficulty in making an appointment with a doctor | 17 | 48.6 |
| Lack of time to go to the health center | 8 | 22.8 |
| Guidance from someone who reported symptoms similar to yours | 6 | 17.1 |
| Pharmaceutical guidance | 26 | 74.3 |
| Have been previously prescribed by the doctor for the same symptoms | 3 | 8.6 |
| Internet search or other means of information | 1 | 2.8 |
| Advertisings on radio, TV, newspapers and/or magazines | 5 | 14.3 |
| Medicine cheaper than the one prescribed by the doctor | 7 | 20.0 |
| Have already solved the health problem before, without consulting the doctor | 24 | 68.6 |

## Discussion

This study sought to identify self-medication profiles in elderly people assisted in the basic health care network. Therefore, we investigated the presence of CNCDs, the drugs commonly used, information on self-medication, the situations, and the reasons that lead those people to resort to such a practice.

The studied individuals were mostly female, retired, and had white skin color. These data a similar to another study carried out in a BHU in São Luís, Maranhão[12], which sought to identify the prevalence, determining factors, and the main drugs used without a prescription among the elderly. The authors concluded that self-medication has a high prevalence among the studied population, and analgesics are the most commonly used drugs due to their easy access in drugstores. On the other hand, in our study, antihypertensive was the most consumed drugs among the studied population. This result is believed to be due to the most frequent CNCDs being the heart-related ones and systemic arterial hypertension (SAH) being among them.

In a study enrolled in Manaus, Amazonas, the authors identified the practice of self-medication in 75% of volunteers, where 95% of the studied population reported being physically active, and 67.5% claimed to have SAH. The most used over-the-counter drug was Dipyrone to treat headaches, and most of the volunteers had incomplete primary education.[13] In contrast to these findings, we observed that 60% of the volunteers enlisted in our study were sedentary. Cardiac NCDs stood out in our studied population, followed by metabolic diseases and most volunteers were illiterate. It was not investigated which over-the-counter medications were recurrent in this current research; however, the most frequent reason for the volunteers to resort to this practice was sore throat, followed by headache and bone pain.

The administration of medications to elderly people needs attention due to polypharmacy and the physiological changes in the elderly's body, altering the drug absorption process. Feeling any kind of pain favors the practice of self-medication due to the ease of access to analgesic drugs.[14] Pain, whether in the throat, head, bone, spine, stomach, among others, was the condition that most led the studied elderly to resort to the practice of self-medication. A population-based survey[15], carried out in Goiânia, Goiás, evaluated the pattern of medication consumption of 934 elderly people, most of whom were female, with a mean age of 71.9 years. Analgesics were consumed by 9.1% of the volunteers, where the authors reported that the consumption of analgesics by the elderly occupies a prominent place due to the treatment of pain and inflammation, common situations in this age group.

The diagnostic plurality to which the elderly individual is subjected favors polypharmacy and consequently self medication.[16] Most of the volunteers in this study reported taking medications regularly, having confused the medication schedules, and taking medications that their physician does not prescribe. Another study[17] used the instrument for the Measure of Treatment Adherence (MTA) in order to assess adherence to drug therapy of 308 elderly individuals in primary care, where most volunteers reported never being careless with the time for taking a specific medication and never left taking medication for any reasons other than medical advice. The authors concluded that the elderly have an adequate adherence to drug therapy and that health professionals should alert the elderly about the dangers of practicing self-medication.

In a BHU from Minas Gerais, 50 elderly people reported that they resorted to the practice of self-medication due to headache, followed by flu, and the fact that they had the drug at home was the most frequent justification for practicing self-medication, where 88% of the volunteers reported performing this practice more than ten times a month. The authors concluded that the practice of self-medication is closely related to the lack of information and that the nursing team had the role of educating and informing the population about its prevention.[18] In our study, the headache was the second most frequent cause among the reasons that led volunteers to resort to self-medication, and most stated that they had not received prior information about the risks of taking the medication without their physician's knowledge. Thus, once again, it is worth drawing attention to the elderly's health education regarding the risks of self-medicating and preventing events that come with this practice.[19]

In this current study, elderly self-medication was provided by issues such as pharmaceutical guidance, resolution of the condition without prior medical appointment, and difficulty in accessing a medical professional, respectively in that order. In a group of elderly women from Distrito Federal, 30.8% said they used one or more products without a medical prescription, and most had low education. The authors highlight that the use of medicines without medical prescription can increase the number of drugs used by the elderly and the masked symptoms, in addition to drug interactions and possible adverse effects. The study states that pharmaceutical care measures must be efficiently implemented to prevent the practice of self-medication.[20]

A survey[21] carried out with 170 elderly individuals in Belo Horizonte, mostly females, sought to determine the drug profile for self-medication in these individuals. As a result, 80.6% said they practice self-medication, and muscle relaxants and non-steroidal anti-inflammatory drugs (NSAIDs) were the most frequently used drugs. However, this survey warns that the risk of drug interactions is high, given the widespread use of over-the-counter medications, in addition to the emergence of adverse events in elderly people.

In the present study, seven different drugs were identified; antihypertensive and antidiabetic drugs were the most frequent because cardiac and metabolic CNCDs, such as SAH and Diabetes Mellitus (DM), respectively, are the most prevalent in our sample. Analgesics accounted for 5.71% of the continuous drug use reported by the volunteers. However, pain in different body regions was the reason that led most of the elderly individuals to seek self-medication. This fact demonstrates the importance of the high frequency of pain in the elderly population and the recurrent use of medication to treat it.[22]

A systematic review[23] showed that the rate of self-medication in the elderly is large and that the most consumed classes of medications are analgesics, antipyretics, anti-inflammatory, drugs of cardiovascular action, and dietetics. However, the authors state that there is a limitation regarding the factors associated with self-medication in the elderly and that studies lack standardization of what is self-medication for these individuals. In our study, the elderly demonstrate that they are continuously medication users and that they did not seek information about the medications they used when practiced self-medication and that they also use medications that their doctors do not prescribe. This fact demonstrates that the practice of self-medication occurs as a search for symptom relief and is a less costly alternative to reduce the costs of health services.[24]

The Non-validation of the instrument to identify the profile of self-medication in elderly individuals in primary health care, in addition to the small samples, are the limitations of our study.

## Conclusion

The study allowed us to describe the practice of self-medication in elderly people assisted in primary care, in addition to the most recurrent reasons, such as pain and flu/cold, which lead them to resort to such practice, as well as everyday situations, such as pharmaceutical guidance and difficulty in access to medical professionals, which facilitates self-medication.

Most elderly people reported that they did not receive prior information about the risks that this practice entails. They have already confused the medication schedules and have already used medications that a physician did not prescribe; antihypertensives and antidiabetics were the most consumed drug classes in the studied population.

Health education measures must be implemented to remedy the lack of information about the risks that self-medication can trigger, facilitating access to medical professionals and aligning the information passed on to the elderly along with pharmacists.

Data from this research reflect on the profile of a small sample from a small city; although its data cannot be extrapolated to the general population, many points observed here are similar to those of previous studies and serve as a basis for future researches.

### Author contributions

Conceived and planned the manuscript: Silva TCA, Júnior FCCM and Ribeiro MDA. Collected and analyzed the data: Siva TCA, Silva JCA, Carvalho JS and Biângulo FA. Wrote the manuscript: Silva TCA and Silva JCA.

### Competing interests

No financial, legal, or political conflicts involving third parties (government, companies, and private foundations, etc.) have been declared for any aspect of the submitted work (including, but not limited to grants and funding, advisory board participation, study design, preparation manuscript, statistical analysis, etc.).

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